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DAKOTA IMPROVED SEED COMPANY

MITCHELL, S. D. SEED GUIDE

1958

Disco
SEEDS
REGISTERED TRADE MARK

**OVER 50 YEARS OF
DEPENDABLE
SERVICE**



DAKOTA IMPROVED SEED CO.

MITCHELL, RAPID CITY AND WATERTOWN, S. D.

EMMETSBURG AND WATERLOO, IOWA

CRAWFORD, NEBRASKA



A Good Name Well Known

For Over 50 Years Has Signified the Best in Seeds.

Grow Well Because They Are Well Grown.

**To insure prompt attention address
the firm, not individuals.**

Dakota Improved Seed Co., Mitchell, S. Dak.

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IF HE CANNOT SUPPLY YOU, WRITE US

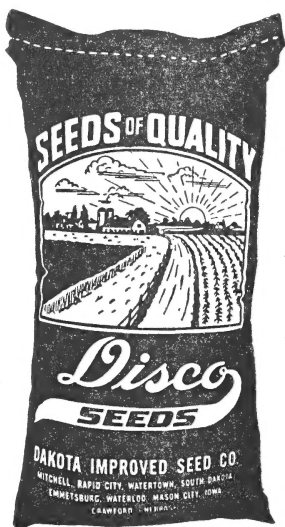
The Dakota Improved Seed Company warrants to the extent of the purchase price that seeds or bulbs sold are as described on the container within recognized tolerances. Seller gives no other or further warranty express or implied.

FARM SEEDS

DISCO BRAND FARM SEEDS, because of more than 50 years of dependable service, have become the standard by which farm seed values are compared. For purity, germination and vigor to produce excellent crops, there is no superior. Each lot is selected from crops known to be excellent quality and then all foreign matter is removed as thoroughly as it is humanly possible to do.

**Be Safe—
Buy
Farm Seeds
by Brand**

Brands give you the protection of the producer's reputation. A reputation for dependability, gained through many consecutive years of service in a district, is an asset to those who buy the merchandise as well as to those who produce it. This is especially true in the case of Disco seeds—where value cannot be ascertained by inspection. Then, too, Dakota Improved Seed Co.'s Farm Seeds are distributed through local dealers—a convenience and another assurance of better quality because they are backed by the reputation of the dealer in addition to the 50 year reputation of Dakota Improved Seed Co.





DISCO ALFALFA



All our regular Brands of Alfalfas are shipped out in sealed bags, and origins supported by **U.S. Verified Origin Certificate**. Look for this seal and certificate which insures genuineness. All our Alfalfas are hardy, Northern Origins.

SOIL REQUIREMENTS

Alfalfa does best on deep, well drained soil, high in lime. It will, however, do well on almost any soil that is not too wet, too cold or too alkali.

Liming should always be done well in advance of legume seeding because it takes some time for limestone to act.

Alfalfa furnishes its own nitrogen, but does require phosphorus and potash. (It is well to send in samples of your soil to the testing laboratories and have them analyzed.) All fertilizer should be worked into the soils with a disc, spring-tooth harrow, or a field cultivator well in advance of seeding.

SEEDBED

A firm, moderately smooth seedbed is important.

Loose ground does not hold moisture and dries out so rapidly that the seeds will not germinate or if they have already germinated, die from lack of moisture.

In loose ground the seeds are very apt to be covered too deeply.

Best results are obtained by fall plowing if there is no danger of erosion. The soil will settle during the winter and be ready for planting in the spring.

If fall plowing is not practical, the Alfalfa should be put in with a nurse crop as early as possible in the spring.

SEEDING

If Alfalfa is seeded with a spring nurse crop on unplowed ground, be sure the ground is well disced and all trash is cut up. After the nurse crop is in and covered, broadcast the Alfalfa and harrow in. If the soil is dry, use a roller or culti-packer for the covering operation.

Summer seeding is one of the surest ways to get a stand of Alfalfa. By this method the field is fallowed for 5 to 8 weeks in the spring to kill weeds. Sow Alfalfa alone from June to August.

NURSE CROPS

Use only those that mature early. Seed them at a moderate rate. Manage the nurse crop to prevent competition for moisture. Rate of seeding of the nurse crop: sow 4 to 8 pecks per acre of Oats or one-third to one-half normal rate for other nurse crops. In regions of limited rainfall, the use of a nurse crop has proven disastrous and is not recommended unless cut early for hay.

RATE OF SEEDING

12 to 15 pounds alone or 5 to 8 pounds in grass mixtures.

On poor soil, where weeds are likely to be troublesome, the best rate of seeding is 15 pounds per acre. Under more favorable conditions, 10 pounds are ample.

ALFALFA

Use Legume Aid when planting Alfalfa Seed.

GRIMM

This is the best known member of this group in the United States. It is difficult to tell Grimm from Common alfalfas. In the drier areas where it is grown it will show great variation in flower color.

Very hardy, Grimm has been recommended particularly for all Northern States. But because of its susceptibility to bacterial wilt, it is becoming less popular where this disease is prevalent. A good seed producer, it is useful in short rotations. It produces yields equal to Ranger until wilt begins damage.

COSSACK

It is a hybrid between the common and yellow-flowered alfalfa. The flowers show more yellows and whites. Adapted to the same growing conditions as Grimm, it has not shown evidence of being appreciably superior to Grimm under most conditions. Extremely winter-hardy, it is second only to Ladak in forage yields after the first two years.

LADAK

Ladak alfalfa was obtained from India in 1910 and is predominantly yellow-flowered. Ladak's one outstanding characteristic is its ability to make an exceptionally heavy first crop. This makes it especially valuable where only one cutting is normally obtained. It recovers slowly and the second and third crops of other varieties often exceed those of Ladak. However, there seems to be little difference in the total annual yield.

VERNAL ALFALFA

This is a synthetic variety produced by the Wisconsin Experimental Station from crosses involving cold and wilt resistant selections out of standard varieties, with derivatives from a diploid form of MEDICAGO FALCATA, the yellow-flowered alfalfa. Vernal excels in winter hardiness and in resistance to bacterial wilt. It has been superior to Ranger in hay yield and is reputed to be more persistent when grown with grass under grazing.

RANGER ALFALFA is wilt resistant. For farmers who plan to rotate their alfalfa fields with other crops every three or four years it loses its advantage, except in heavily wilt prevalent areas. It does not outyield Cossack, Ladak or Grimm except in wilt affected areas.

CALIFORNIA GREEN MOUNTAIN BRAND ALFALFA

For one year rotation. If you desire a quick growth of heavy foliage to plow under the first year use Southern, or California Green Mountain Brand Alfalfa; you will find that this builds up the nitrogen content and organic material in your soil very rapidly.

ALFALFA AND CLOVER SEED GERMINATION is higher when the combine cylinder speed is kept low. Experiments reveal that germination can frequently be increased as much as 10 percent by merely reducing cylinder speed. For maximum germination, the following speeds have been found best for cylinders of various diameters: 18-in.—850 rpm; 20-in.—765 rpm; 22-in.—695 rpm; and 24-in.—635 rpm. These same tests also show that much seed can be saved by slowing down the travel speed of the combine. Tests showed 10 pounds per acre of seed were lost at .8 miles per hour; 35 pounds at 1.2 miles per hour; and 74 pounds at 1.4 miles per hour.

SWEET CLOVER

The most efficient of all common legumes for rebuilding depleted soil nitrogen. A normal stand will add from 80 to 100 pounds of nitrogen per acre—the equivalent of 8 to 10 tons of barn manure or 400 to 500 pounds of ammonium sulfate. Most Sweet Clover is more or less mixed white and yellow blossom which matures later than ordinary yellow blossom and therefore, may be preferred if used for pasture the second year.

MAINLY WHITE SWEET CLOVER

This is by far the most popular biennial variety. It stores up a tremendous quantity of reserve food in its deep tap root. Sow 12 to 15 lbs. per acre.

YELLOW DWARF

This variety is also a biennial, growing a crop the first year; flowers, bears seed and dies at the end of the second year. Stems are finer. Sow 12 to 15 lbs. per acre.

MADRID YELLOW

The new improved yellow Sweet Clover called Madrid is outstanding for plowing under and is a superior soil builder.

South Dakota State College experiments show that it yields approximately 50% more foliage than the common varieties. Iowa and Minnesota experiments show almost the same results.

HUBAM

Annual white. Where it is considered desirable to have the crop make its growth, flower, form seed and die in one year, Hubam has advantages. Sow 10 to 12 lbs. per acre.

ALSIKE OR SWEDISH CLOVER

Produces the finest crop of clover hay; unusually hardy, and well adapted for pasture. Thrives best on low lands. Sow 5 to 6 lbs. per acre.

BIRDSFOOT TREFOIL

A rather short growing, long lived perennial legume not recommended where other Clovers do well, but of considerable value as a supplementary legume in pastures where soils are not so well adapted to Alfalfa and Ladino.

WHITE DUTCH CLOVER

A short growing biennial primarily used for lawns. Usually volunteers in Blue Grass meadows and Alsike fields in wet seasons.

MAMMOTH AND MEDIUM RED CLOVER

(*Trifolium* spp.)

Soil Requirements

Red Clover makes its best growth on rich, well drained soil high in lime. The field should be reasonably free of weeds. Red Clover will not tolerate alkali and is not drought resistant.

Seedbed

The same as for Alfalfa and Ladino.

Seeding

Red Clover may be broadcast or drilled alone or in mixtures with other legumes or grasses. If broadcast alone, 10 to 15 pounds per acre are used; if drilled alone, 6 to 8 pounds, and when in mixtures it is added (to the mixture) at the rate of 2 to 4 pounds per acre.

Plant more Clovers and Alfalfa to build up your soil. Clovers and Alfalfa will put nitrogen and organic materials into your ground faster than any other crop. It is time that each 160 acres of farm land has 40 acres of Clover or Alfalfa planted each year and plowed under. If this is not done at once, our entire State will lose its fertility. By using Clover and Alfalfa, you can add nitrogen to your soil at a lesser cost than using commercial fertilizer.

Planting Clovers or Alfalfa does not cost you, it pays you. Stop and think before it is too late.

Be Sure To Inoculate

The same inoculation that is used for common white, medium red and Alsike Clover is effective.

LADINO CLOVERS

Soil Requirements

Does best on deep fertile soils high in organic matter. Is usually successful on clay soils well supplied with moisture.

Ladino will tolerate more acidity than Alfalfa. It does respond well to lime, however. It is recommended that limestone be applied at the rate shown by a soil test.

GRASSES

BROME

Use of Bromegrass

Bromegrass forms a strong sod that is well adapted to pasturing and soil erosion control. It is one of the most cold- and drought-resistant of all grasses. It is not desirable to seed it alone except for seed production. Alfalfa, trefoil, and ladino clover are the best legumes to use with it. Brome and alfalfa will outyield all other mixtures for hay.

CANADIAN BROME

This is called Northern Brome and is drought resistant and very hardy, is a very heavy yielder and comes early in the Spring and makes pasture all Summer and Fall.

LINCOLN

Lincoln is a mixture of selections from several old

fields in Nebraska that were shown by tests to be of similar type and superior in productivity. These original fields are thought to have been seeded from the earliest plantings of seed from Hungary. These first fields were planted before 1898.

WHEATGRASS

TALL WHEAT

A new tall, branch-type grass which shows tolerance to very wet alkaline conditions. It appears to be useful on such low-lying land as is unsuitable to production of other tame grasses or crops.

INTERMEDIATE WHEAT

This is a perennial sod-forming grass. It shows great promise for use as a pasture and forage species in the Northern and Central parts of the Great Plains. It is more drought-resistant than Smooth Brome and somewhat less hardy and drought-resistant than Crested Wheatgrass. The abundant, leafy foliage is relished by all classes of livestock.

CRESTED WHEAT

(*Agropyron desertorum*)

This is a native of the cold, dry plains of Russia and Siberia and was introduced into the United States about 1898. It does well on productive soils of any type from light sandy loam to heavy clay. It will not tolerate alkali as well as western wheat grass.

Crested wheatgrass is a bunchgrass and will produce well for 15 or 20 years. It has proven to be very satisfactory for regrassing abandoned farm ground and will give greater returns than any other range plant for areas with 12 inches of rainfall or less. Practically all that is grown in the United States is Standard.

FAIRWAY CRESTED WHEAT

(*Agropyron cristatum*)

Developed by selections from imported seed. The work of selection was done by Canada. Fairway has finer stems, is more leafy and tillers more than Standard. The Fairway has smaller seeds that carry more and longer beards than Standard. There is little, if any, difference in yield, drought resistance, and quality of hay or pasture. Standard will do better as the crop is taken southward.

WESTERN WHEAT

(*Agropyron smithii*)

Western wheatgrass is valuable for both forage and erosion control. It produces a very early growth in the

spring that is a palatable high-protein pasture. It has a tough creeping rootstock which forms a tough dense sod. The seed is easily harvested with a grain combine.

SLENDER WHEAT

(*Agropyron trachycaulum*)

This is a short-lived, perennial native bunchgrass that has been brought into cultivation and is now widely used in the Northern Great Plains States and Canada.

When drilling Brome and Wheatgrass, you should use 15 to 20 pounds per acre on a firm, solid seed bed.

REEDS CANARY

A hardy perennial grass suitable for hay or pasture. Buggy or marshy land can be transformed from a liability into an asset by seeding with this Canary Grass. Should be broadcast 5 to 6 pounds per acre, drilled 3 pounds per acre in 16 to 18 inch rows.

RED TOP, SOLID SEED

Grows most luxuriantly on moist rich soils; very desirable for pasture purposes. Sow 6 to 8 pounds of solid seed per acre.

TIMOTHY

Almost too well known to necessitate any description. A hardy perennial, having strong resistance to both cold and drought. Sow 10 to 15 pounds per acre.

ALTA FESCUE

Is similar to Meadow Fescue but taller, hardier, and longer lived. This is a relatively new grass. It is not equal to *Bromus* in the Northern area, but in the lower part of the Corn Belt it has shown its superiority to Brome in mixtures with Alfalfa, Ladino, and Birdsfoot Trefoil.

ORCHARD GRASS

A tall growing perennial bunch grass which produces neither rhizomes nor stolons, but reproduces readily from seed. Is a rather coarse plant. Grows quite well in the shade and is ideal for pastures. Makes an abundant growth from early April to early July, as well as late Fall. Highly recommended for the Middle West.

DOMESTIC RYE GRASS

Grows from two to three feet high, is leafy and tender. Furnishes early grazing and is ideal for a nurse crop in perennial pastures and lawns. Is a heavy yielder, but will not live through the winters in the Northern United States.

PERENNIAL RYE GRASS

A perennial which will last from three to four years. It is very tough and therefore this grass is unpopular for lawns. Makes ideal pasture grass. Is well adapted for regions with cool temperatures and ample moisture. Can be used quite extensively in perennial pasture mixtures.

DISCO LAWN SEEDS

DISCO SELECT MIXTURE—Perennial grasses are used exclusively in this mixture which is equal to any grass seed mixture on the market. 1 lb to 200 square feet.

DISCO EVERGREEN MIXTURE—An old favorite of Disco customers. Well blended mixture. Sow 1 lb. to 200 square feet.

POA TRIVIALIS—Excellent for shady places. Sow 1 lb. to 200 square feet.

HIGHLAND BENT GRASS—Bent grasses are increasingly popular for lawns, especially in towns where lawns are small. Sow 1 lb. per 250 square feet.

KENTUCKY BLUE GRASS—Many home owners use this grass with excellent results. Sow 1 lb. per 200 square feet.

MERION BLUEGRASS—A new hardier, more drought-resistant strain of bluegrass. Withstands much more wear and tear, and forms a dense turf which helps to keep weeds choked out of the lawn. Sow 1 lb. per 300 square feet.

CREEPING RED FESCUE—One of the best fescues, it spreads from the roots. Does well in shade or in the open. Sow 1 lb. to 200 square feet.

DISCO YELLOW HYBRIDS

A WORD ABOUT HYBRID CORN . . .

There are two types of Hybrid Corn: (1) hard flinty type, and (2) soft, starch type. It has never appeared to us that it was good sense for a man to buy hybrid corn in order to obtain an increased yield, and then lose the advantage which he had gained in his feed lot. An animal cannot get the full feed value out of hard, flinty corn, without grinding. We have bred our hybrids for both feeding value and yield.

The Disco Hybrids show a large percentage of soft starch kernels. Our satisfied users find that it makes better feed corn than the hard, flinty varieties which are so commonly sold. Disco Hybrids are bred so as to resist corn borers.

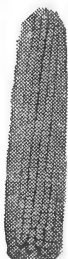
Every Disco Hybrid offered for sale has been fully proved over a period of seasons under our hot, dry climatic conditions in the Midwest, and they have withstood the adverse conditions which must be contended with in order to produce.

All Disco Hybrids are uniformly graded and properly tested before leaving our plant, and treated to insure a good stand.

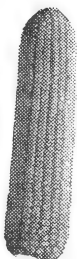
*Use Disco Hybrids
that Mature
and Yield*

— DISCO YELLOW HYBRIDS —

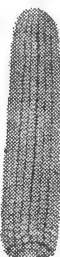
DISCO 80-WD—80 Day Relative Maturity. This is the earliest Yellow Dent Hybrid. Ears are of good size with deep kernels and very small cob. It has become well established in the northern belts for both grain and silage. Does well on good soil.



DISCO 85-W—85 Day Relative Maturity. This is an unusually early hybrid corn for the northern part of the Corn Belt. It stands up well and has ears about seven inches long. Does well on all soils.



DISCO 90-W—90 Day Relative Maturity. Early maturing variety, suitable for entire mid-west area. This corn has shown great promise in northern counties, and is highly recommended for that section. It has been outstanding in West River and Black Hills territory. Does well on all soils.



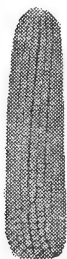
DISCO-SD 220—90 Day Relative Maturity under South Dakota conditions. This is one of South Dakota's new Hybrids. It is recommended for the northern and western tier of counties of the state. Yields are excellent; especially good under heat and drought adversity. Plants are medium height with excellent standability. It has been outstanding in South Dakota corn trials.



DISCO 91-WR—90 Day Relative Maturity. Half Northwestern Red Dent and half Yellow Dent parentage. The seed that you buy will be either yellow or red, depending on the cross we use. The ears of the final crop are Red-Yellow with large kernels filled with mealy white starch. For feeding value you'll see that all livestock prefer the 91-WR corn.

If, for any reason, you do not get a stand of Disco Hybrid and wish to replant your field the same season see Dakota Improved Seed Co.

— DISCO YELLOW HYBRIDS —



DISCO 95-W—95 Day Relative Maturity. An early maturing corn which shows a deep kernel and a nice uniform ear. Very similar to the Early Murdock type. This is an outstanding hybrid for the midwest corn area. Good on all soil types.



DISCO-SD 250—95 Day Relative Maturity. This is another of South Dakota's newest Hybrids. It has produced excellent yields especially under weather conditions not favorable for good corn growth. Plants are medium height with good standability adapted for the entire state of South Dakota. You should try this number.

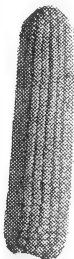
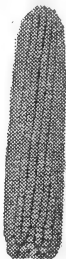


DISCO 101-A—100 Day Relative Maturity. This is one of our newer hybrids and the result of better improved inbreds and careful breeding. It has an excellent root system and sturdy stock. It has nice ear placement and produces large, well developed ears with good kernel depth and type. An unusually high yielder. It is a corn well adapted for the Midwest corn belt and is gaining in popularity. Recommended for better type soils.



— DISCO YELLOW HYBRIDS —

DISCO 107AA—Relative 105 to 107 days maturity. This Hybrid introduced last year has taken its place among the top Hybrids in the North Central Corn Belt. This Hybrid has made an outstanding record in all corn yields. Has a well shaped ear, excellent lodging resistance and low ear droppage. Compare it with any Hybrid you ever raised and you be the judge.



DISCO 108-AA—104 Day Relative Maturity. This is one of our improved hybrids. DISCO 108-AA is a hybrid that shows great promise. Vigorous spring growth, very attractive leafy plants. Deep kernel ears insure high shelling percent. This variety will yield with hybrids a week later in maturity. Shows great promise on corn borer tolerance and the sturdy stalks resist lodging. Bred for the good farmer with good soil.



DISCO 111-AA—110 Day Relative Maturity. An improved member of the DISCO family. Excellent spring vigor. This is a tall plant with good ear height for picking. It has thick cylindrical ears with deep kernels. Good semi-short shank and disease resistant stalks tolerate corn borers. Strong roots for lodging resistance. It has a wide range of adaptation.



DISCO OPEN POLLINATED SEED CORN

DENT VARIETIES

DISCO SPECIAL—South Dakota's best known variety. The best ninety-day yellow dent on the market. Has a very leafy growth and attains a height of from 7 to 8 feet.

FULTON YELLOW DENT—An excellent 90-day yellow dent good feeding corn.

BLACK HILLS DENT—Earliest South Dakota bred yellow dent. The best under tough conditions. 85 to 90 days.

BROWN COUNTY DENT—Popular early dent with an enviable record of performance.

MINNESOTA 13—High yielding, early to medium maturity yellow dent. Average ear usually 7 to 9 inches long, maturing in 90 days.

MINNESOTA 13, HANEY STRAIN—Early selection of Minnesota 13. Ears 5 to 7 inches. Compact. A very popular early dent for northern areas.

GOLDEN JEWEL—Adapted to southern half of South Dakota, producing a compact ear, 8 to 9 inches long. Will mature in 95 to 100 days.

EARLY MURDOCK—Matures in 95 to 100 days. Stalks medium in height. Ears from 7 to 8 inches, having 16 to 20 rows.

SILVER KING WHITE DENT—A very early White Dent corn that will mature in 90 to 95 days under normal conditions. Ears 8 to 9 inches long with 16 rows of deep grain kernels.

NORTHWESTERN RED DENT—Red in color with a white cap. Will mature in 80 to 90 days and is excellent corn for hogging off.

SEMI-DENT VARETY

FALCONER—An exceptionally heavy yielder, ears are high enough to be easily cut with a corn binder. Stalks are leafy. Ears 12 to 14 rowed, 8 to 10 inches long.

FLINT VARIETIES

Specially suited for late plantings. Show great resistance to dry weather.

GEHU—The earliest flint corn. Excellent for hogging off.

RAINBOW FLINT—A good yielder. It is excellent for hogging off.

SQUAW—Hardy, high yielding, early flint. A favorite for field feeding.

SORGHUM (Sorghum Vulgare)

Soil Requirements

The sorghums may be grown on almost any type of soil. It does best, however, on deep fertile, well-drained sandy loam. This crop is extremely drought resistant and will produce grain and forage in years when corn is a complete loss. It responds well to fertilizer where moisture is not a limiting factor. It does not compete with corn in yield where corn can be produced, but in areas where corn does not get the required amount of moisture sorghums have found a place for both grain and forage production.

SORGHUMS FOR GRAIN

Up from Kansas comes the story of a great new feed crop!

FROM SCOTT CITY, KANSAS — long famous as the "milo capital" of the U S — comes the amazing story of Frontier Brand Hybrid Sorghums — the midwest's new feed crop! For today's Frontier Brand Hybrids are more than mere improvements on standard, open-pollinated sorghums. Hybridizing and selective breeding have given plants new vigor, so that seedlings push their

way through even thickly-crustured soil, with strong, uniform emergence under extremely adverse conditions. Hybridizing and breeding have developed stronger, sturdier plants with huge seed heads holding up to twice the weight of grain — stiff, erect stalks that carry heads at just the right height for easy combining. In fact, all that's left of old-fashioned milo is its famous drought resistance!

frontier

Brand

Hybrid Sorghums

Grown by Milo Specialists
Frontier Hybrids, Inc.
Scott City, Kansas



Grown at Scott City...Crop-tested in Mexico

AT SCOTT CITY, nature provides the ideal conditions for sorghum seed production... hot sun, rich soil, wide expanses of level, irrigated land... great wheat fields to provide complete isolation and prevent accidental cross-fertilization... and, most important of all, freedom from Johnson Grass — deadly enemy of hybrid sorghum seed production. At Scott City, Frontier Brand seed is field-cured and field-dried

to guarantee higher germination, strong emergence and uniform stands. And, for your protection, samples from each field of Frontier Brand seed are flown to Mexico, planted there during the winter months, then carefully checked to make sure each lot of seed produces uniform, true-to-type plants. No matter where you farm, plant at least some of your acreage to Frontier Brand Hybrid Sorghums in 1958!

FRONTIER HYBRID—Tests show 30 to 40 percent increase in yield over Open-Pollinated varieties. Stands well and has a large compact head. Not to be planted until the soil is thoroughly warm.

FRONTIER 385 BRAND—Early Maturity Hybrid. This hybrid is bred to produce maximum yields in the shortest period of time. Just the right height for combining, it has a medium slender stem which is almost completely free from suckers. The medium-sized, semi-dry head is borne well above foliage. Light red seeds mature in about 85 days after planting. Under certain conditions, it is slightly more subject to lodging than other Frontier Brand varieties. Frontier Brand 385 is recommended for northern areas with a shorter growing season, or for late plantings in good milo country.

FRONTIER 400 BRAND—Medium Early Maturity Hybrid. This famous Frontier Brand hybrid has repeatedly demonstrated its ability to out-produce later-maturing hybrids and standard varieties under almost all conditions and in almost all sections of the midwest. Medium-size, compact semi-dry heads are carried well above the sparse leaves, and in many cases can be harvested before frost. The moderate-size stem does not tiller or branch. Large, light-red seeds mature in 90 to 95 days, and under normal conditions, lodging is not a problem. Frontier 400 Brand is recommended for good land and normal rainfall—yet produces outstanding yields under drouth conditions. It has proven superior in plant emergence under adverse conditions and over a wide area, resulting in better stands with less seed per acre.

RELIANCE—This grain sorghum has been developed by South Dakota Agricultural College.

It has done exceptionally well this year where an early grain sorghum was desired. The standability is excellent and the yield very good.

Plant 4 to 5 pounds per acre.

MARTIN'S COMBINE MILO—It grows to a height of 3 to 4 feet, has a compact head. Very deep rooted, thus enabling it to stand drought. Also withstands severe windstorms, and stands up where other grain milos break down. Heaviest yielding combine milo grown. Plant 3 to 5 pounds per acre.

EARLY KALO—A variety of grain sorghum which was introduced at the Ft. Hays Experiment Station, Hays, Kansas.

SORGHUMS FOR FODDER

Don't plant any forage crop seed before the soil is thoroughly warmed up.

SWEET SUDAN—Sweet Sudan is another of the Leoti X Sudan crosses. It has sweet, juicy stems, non-shattering seed, good disease resistance and a distinctive brown-colored seed. It is well liked by all classes of livestock even when mature and dried.

PIPER SUDAN—It is a sweet Sudan developed by Wisconsin Agricultural Experiment Station. Selected for disease resistance, low prussic acid content and for a longer period of growth in the Fall. It has made excellent yields of both seed and forage. This is a new variety and well worth a trial.

GREENLEAF SUDAN—New variety which is a high yielder of Leafy choice feed. Is disease resistant. Very low in Prussic Acid and very palatable to all classes of livestock.

NORKAN—A cross between Sumac and Atlas Sorgo; two weeks earlier than Atlas Sorgo. Highly recommended by ranchers, 10 to 12 pounds per acre.

WACONIA SORGHUM "Genuine Originator's Stock"—This variety has proved to be the most outstanding sorghum ever grown. It has heavy tonnage and the lightest sugar content of any sorghum known. Excellent for silage. Drilled 10 to 12 lbs. per acre.

DISCO SWEET SORGHUM—This is a true variety of sorghum cane for fodder and syrup. It has everything a good sorghum cane should have. Many ranchers prefer this variety as the stock cleans it all up and relishes it. Drilled 10 to 12 lbs. per acre.

SUMAC—This is a true variety of sorghum cane for fodder. It has everything a good sorghum cane should have. Give it a trial, as we thoroughly recommend it. Drilled 10 to 12 pounds per acre.

ORANGE SORGHUM—One of the best canes, sweet and leafy. The stock will eat it all up, not leaving the stalk, as they do some canes.

ATLAS SORGO—Gives a tremendous yield per acre in forage. The usual quantity sown per acre is 8 to 10 pounds. Southern grown.

NEW LOW PRUSSIC ACID CONTENT EARLY BLACK AMBER No. 39-30-S—Our stock is certified, or grown from certified seed. Drilled 10 to 12 pounds per acre.

RANCHER—The lowest hydrocyanic acid Dakota Amber forage sorghum in production. Developed by the South Dakota Experiment Station.

EARLY BLACK AMBER—The Amber is the earliest of all the fodder canes. Will stand extremely dry, hot weather. Considered excellent for feeding stock. Sow 40 to 60 pounds broadcast; 10 to 12 pounds drilled per acre.

HONEY DRIP—This variety is very popular in some sections of the northwest. The stock relish the leafy stalk. Drilled 10 to 12 pounds per acre.

LEOTA RED—A good early cane with stalks slender, juicy, sweet. Mid leafy. Height 6 to 7 feet.

COES—A combination of grain and forage crop. Will grow between 5 and 5½ feet tall, producing a heavy crop of forage and seed. Mature in about 90 days in an average season.

KAFFIR CORN—Stalks grow from 5 to 6 feet tall, are very leafy, make excellent feed for all livestock. When cut for seed it will yield as much as 35 to 50 bushels per acre. Drill 8 to 12 pounds per acre.

MILLETS

The Millets are annual grasses that make their growth through the warmer weather of the summer months. They are not drought resistant and require moisture throughout the growing period. Millets can be divided into two classes: Foxtail Millets and Proso Millets.

FOXTAIL MILLETS

SIBERIAN—A hardy drought resistant variety. Seeds are orange in color. Under good growing conditions, it is ready for harvest in 60 to 75 days.

GERMAN OR GOLDEN—This millet varies considerably in appearance and growth habit. Makes heavy yields of forage and under favorable conditions. Is not at all resistant to drought. The seed is yellow and slightly smaller than common Millet.

PROSO MILLETS

Hog or Proso Millets are used for hay, ensilage, or may be harvested for seed. The seeds are three or four

times as large as Foxtail millets and vary in color from white yellow to red. They are handled much as other millets. Seeded broadcast or drilled from a grain drill at the rate of 40 to 50 pounds per acre. The seed has about the same feed value as barley and the yield is as high as fifty or sixty bushels per acre. Matures in sixty or seventy days. Must not be sown until the ground is warm.

EARLY FORTUNE—An extremely early grain millet with reddish-brown kernels. Because of its low growth and extremely early maturity this variety is relatively low in yield. It does have a place, however, where an early-maturing emergency crop is needed. It matures in 60 to 70 days after sowing. Rate of seeding same as Proso.

SOYBEANS

Planting rate in South Dakota 60 to 80 lbs.; Iowa, 80 to 120 lbs. per acre.

CHIPPEWA

A new release, is approximately 5 days earlier than Blackhawk, yet is equal to it in yield and oil content and is superior in lodging resistance. Chippewa is adapted in the central part of South Dakota's Soybean area.

BLACKHAWK

Blackhawk is a selection from the cross (Mukden X Richland) made by the Iowa Station. It is a very early maturing bean with gray pubescence; flowers, white; pods 2 to 3 seeded; shatters very little; seeds, straw yellow with brown hilum; about 2900 per pound; germ, yellow; oil 20.2 per cent; protein, 41.9 per cent; iodine number, 129.

Blackhawks are now being recommended for all of the area where Earlyana has been grown—Michigan, Wisconsin, Minnesota and the eastern part of South Dakota, Northern Iowa, Illinois and Indiana. color is gray.

OATS

BONHAM. An early maturing variety and has out-yielded Cherokee by 3 to 8 bushels per acre in most tests. Also, this is disease resistant.

Don't Take Chances on Off-Brand Seeds. Insist on DISCO QUALITY ALWAYS

RANSOM

Ransom is a new oat variety selected from the cross Sac x Hajira-Joanette. Ransom is a white oat, medium

early, being similar to Andrew, has a medium stiff straw, and the test weight is usually good. It is resistant to races 7, 8, and 7A of stem rust and has good resistance to crown rust and smut. The yield of Ransom has been satisfactory. This variety fills a very definite need for an early oat variety with resistance to stem rust races 7, 8, and 7A.

WAUBAY

A late variety with a sturdy stiff straw taller than Clinton. This variety is resistant to stem rust 7, but susceptible to race 8.

SAUK

A relatively new variety developed from the cross (Forward x Victoria-Richland) x Andrew at the Wisconsin Experiment Station in cooperation with the United States Department of Agriculture. It is a high yielding; has somewhat shorter and stiffer straw than Branch. It has the same general disease reactions, being moderately resistant to Septoria and intermediate in leaf rust response. It is susceptible to race 8 of stem rust but is resistant to race 7. Bushel weight is not quite as high as several widely grown varieties, but is satisfactory.

NEWTON

Newton is an Indiana oat selected from the cross Nemaha x Clinton x (Boone-Cartier). Newton is early, stiff-strawed, short and has a very high test weight. Newton carries resistance to races 7 and 7A of stem rust and is intermediate in its resistance to Septoria black stem and leaf rust reaction.

IMPROVED CHEROKEE

Is a (D69xBond) cross the same as Clinton. Has reddish yellow (ivory) grain. Is early. Has about the same resistance to disease as the other Bond crosses. Cherokee is moderately resistant to races 45, 57 and similar races of crown rust.

CLARION

Medium-tall and medium-maturing, with large, yellow seed of high test weight. Resistant to race 7 of stem rust and to smuts; susceptible to race 8 and crown rust. Selected in Iowa from the cross Clinton x Marion; released in several New England states in 1953.

GARRY

The new Garry Selection (C. I. 6662) was selected from Garry, a Canadian oat variety released in 1945.

Garry Selection is resistant to Victoria blight, is resistant to races 7, 8, and 7A of stem rust, has good resistance to leaf rust and smut, is late in maturing, straw is tall and fairly stiff and the kernel is large and white. Garry has good yielding potential under favorable conditions but its lateness is a definite disadvantage in South Dakota.

RODNEY

Tall, very late, and high-yielding oat. Large, plump seed with a high test weight. Resistant to all stem rust races except 7A and the smuts; susceptible to crown rust. Developed in Canada from a cross (Victoria x Hajira-Banner) x (Victory x Hajira) x Roxton.

BARLEY

"L" OR KINDRED BARLEY

"L" is a rough awned six row variety of the Manchurian type, having medium maturity, considerably resistant to stem rust, excellent yielding ability and less susceptibility to blight and rot.

TRAIL BARLEY

Trail is a medium early, six rowed, rough awned barley. It is resistant to stem rust and has shown considerable susceptibility to high temperatures. Trail is satisfactory in most malting qualities.

RYE

PIERRE

A result of a composite of 16 inbred lines, isolated from a population of Dakold and Swedish origin. It is very winter hardy, and has rapid early spring growth. This is recommended for all areas of South Dakota.

BALBO

This variety has an erect habit of growth, is very early and can be pastured earlier in the fall and spring than other varieties. Highly resistant to Hessian fly. Recommended generally for our main corn producing areas. Tests have shown it to be about as winter hardy as Winter Wheat, but less hardy than most Rye varieties.

TETRA PETKUS RYE

This is a triploid rye and the only one of its kind in the world. Tests have been run on this rye at various experiment stations and its yield is phenomenal. It has large kernels and short heavy straw that stands up well and is resistant to most all rye diseases.

SPRING WHEATS

SELKIRK

A selection from the backcross Redman x McMurachy-Exchange made at Winnipeg, Canada. Selkirk was released early in 1954, and is a beardless wheat, considerable resistance to stem rust, including race 15B and leaf rust. This is slightly taller and later than Rushmore. Selkirk is stiff strawed and has excellent milling and baking quality.

RUSHMORE

The high quality, disease resistant wheat from the South Dakota Experiment Station at Brookings, S. D. Has stiff straw and is an excellent yielder of high grade milling wheat.

**IF YOUR LOCAL DEALER CAN'T SUPPLY
DISCO SEEDS, SEE US.**

FLAX

MARINE

Marine is a new flax developed by North Dakota. It is earlier than Redwood and will prove to be very dependable and a superior performer having a maximum of disease resistance. It's immune to every race of rust found in this area. It's wilt resistant and more tolerant to pasmo than most varieties. Oil content is high and of excellent quality.

REDWOOD

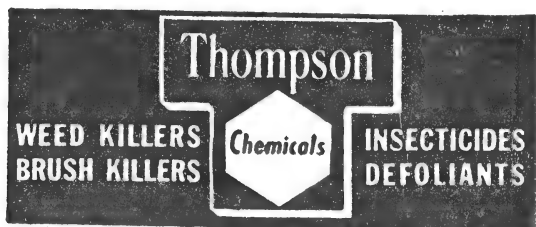
A new variety developed by U. S. D. A. at Minnesota. It yields about the same as B-5128 but is on an average of 6 days earlier. Redwood is immune to races of rust found in the U. S. A. in same manner as Sheyenne, B-5128, Crystal, C. J. 1118 and C. J. 1135. It has fair resistance to wilt.

FLAX B-5128

B-5128 has done a wonderful job in southern Minnesota, northern Iowa, the Dakotas and Texas. It is immune to races of rust found in the U. S. A. At both the Waseca and southwestern Minnesota Experiment Stations it has outyielded new Redwood and all other varieties. It is susceptible to Pasm, as are all varieties, but is moderately resistant to wilt. With B-5128, care should be taken to not use more than the recommended amount of 2,4-D in weed control. B-5128 is a late maturing variety.

Drill flax at the rate of one half to three quarters bushels per acre.

Thompson selective WEED and BRUSH KILLERS are products of the finest research, field tested and used on millions of acres. They contain an extra creeping agent for extra kill. We recommend them without reservation.



WEEDICIDE (2,4-D) AMINE



Safe and easy to use. Non-volatile. Won't clog sprayer. Recommended for weed control in corn and other grain crops. More than pays for itself.

WEEDICIDE

40% BUTYL ESTER

Won't clog sprayers. Gives even distribution. Low polarity for rapid kill of even hardy weeds. For all grain crops. Weed killers are profit makers.

WEEDICIDE 45% ISOPROPYL ESTER

Completely emulsifiable and highly potent. No loss of 2,4-D activity because of rapid action. For wheat, oats, corn and barley.

THOMPSON Better INSECTICIDES

MULTI TOX TL (FOR BACKRUBBERS)

A non-emulsifiable concentrate that will not leach out in the rain or evaporate. Excellent for flies, ticks and lice. Directions for making low cost cable back-rubbers on each can.

SEE YOUR LOCAL DEALER FOR DISCO SEEDS

CHLOROCIDE 128

An effective grasshopper killer containing 73% chlordane in an emulsifiable solution. 8 lbs. of chlordane to the gallon. Half pint to 1 pint treats an acre. Also kills ants, roaches, spiders, lice, etc.

GRAIN WEEVIL FIX

An effective recommended insecticide for the control of grain weevils. Economical to use.

All of above available in 50 gallon, 30 gallon, 5 and 1 gallon containers.

THOMPSON HOME & GARDEN CHEMICALS



WEED A BOMB

The easiest way to control broad leaf lawn weeds—dandelion, ragweed, plantain, pigweed, etc. Shoots weeds dead, quick 'n easy. No stoop. No bend. No kneel.

BUG FIX BOMBS

GARDEN—Kills insects on flowers, shrubs and vegetables. Just press the trigger. Kills aphids, thrips, spiders, many beetles, etc.

HOUSEHOLD—Kills crawling, flying insects such as flies, silver fish, moths, ants, roaches, gnats, wasps, hornets, fleas, waterbugs and bed bugs. No bad smell.



THERE IS NO SUBSTITUTE FOR DISCO SEEDS

REPELLA-BUG FIX—Flick of the trigger furnishes long-lasting protection against many types of annoying insects. No bad smell or greasy, unpleasant film.



SEPTOSAN

Cleans Septic Tanks and Cess Pools. Safe. Effective. No acid. No caustic. No poison. Works by powerful, gentle enzyme action. Six treatments to a package. Keeps septic tanks clean and helps kill odors.

TOMATO FIX

Amazing formula that produces as many as 30% more tomatoes to the vine. Larger, earlier crops. Works on any variety. Simply spray on plant when flowering.



AFRICAN VIOLET ROOTER

Hobbyists' delight. Dip leaf in this hormone and it will shoot roots in from 2 to 3 weeks.

LEGUME-AID

LEGUME-AID is a high quality product. It is backed by a Satisfaction or Money Back Guarantee. It is not necessary to dampen the seed unless you so wish, as it will cling to seed and coat it thoroughly when used dry. Inoculated legume seed when planted is immediately a soil builder. Again we say inoculate legume seed.

FERTILIZERS

Farmers are taking recognition of the fact that soil can get depleted and worn out. Many areas in the U. S. A. have been using fertilizers for over half a century, otherwise their land would not raise crops worth harvesting. We here in the Great Plains Area have been blessed with good soil which has been producing abundant crops when we have had adequate moisture. However, since the introduction of Hybrid Seed Corn and the resultant increase in bushels per acre yields, even the land here is not as good as it

was ten years ago. Hence the increased demand for fertilizers which are not any too plentiful. If interested, write us and we will quote you on what fertilizers we have on hand when we receive your letter.

Panogen

Panogen is the ONLY liquid seed treatment widely recommended by agricultural colleges.

PANOGEN, the original liquid seed disinfectant, has the highest recommendations of plant pathologists for control of seed and soil-borne diseases.

It penetrates the seed coat with a double-barrelled effect, killing the disease-causing organisms, both by contact and vapors, penetrating under the hulls and into the crevices of the seed.

It pays you to treat your seed before planting. 20% increases in yield are not uncommon with **PANOGEN** treated seed.



CERESAN M—For wheat, oats, barley, rye, sorghums, millets and flax. Controls certain smuts. 14-oz. can, 3-lb. can, 40-lb. drums.

ARASAN—Seed disinfectant and protectant for corn, sorghums, peanuts, legumes, vegetables, grasses, gladioli bulbs. Arasan, when used as directed, will usually increase stands and yields by reducing losses from seed decay, damping-on and seedling blights caused by many seed-borne and soil-borne organisms.

MISCELLANEOUS INFORMATION

TO FIND NUMBER OF TONS OF HAY IN LONG SQUARE STACKS

RULE—Multiply the length in yards by the widths in yards, and that by half the altitude in yards, and divide the product by 15. Example—How many tons in a stack 10 yards long, 5 wide and 9 high? Process— $10 \times 5 \times 4\frac{1}{2} = 225$, divided by 15—15 tons.

TO FIND THE NUMBER OF LOADS OF HAY IN CIRCULAR STACK

RULE—Multiply the square of the circumference in yards by four times the altitude in yards, and divide by 100, making the cubic yards in the stack. Then divide by 15 for the number of tons. Example—How many tons of hay in a circular stack whose circumference at the base is 25 yards, and height 9 yards? Process— $25 \times 25 = 625 \times 36 = 22,500$, divided by 100—225, divided by 15—15 tons.

SILO CAPACITY

Size of Silo	Tons	6 Mo. Feed for No. of Cows
10x20.....	28	7
12x20.....	40	11
12x24.....	50	13
14x22.....	62	17
14x24.....	67	19
16x24.....	86	25
16x26.....	95	27
16x30.....	108	31
18x28.....	120	33

TO MEASURE CORN IN CRIBS

Ear corn of good quality, measured when settled, will hold out of $2\frac{1}{2}$ cubic feet to the bushel. Inferior quality, $2\frac{3}{8}$ to $2\frac{1}{2}$ cubic feet.

RULE—At $2\frac{3}{8}$ cubic feet to the bushel, divide the cubic feet in crib by $2\frac{3}{8}$, or multiply by 8 and divide by 19.

At $2\frac{1}{2}$ cubic feet to the bushel, divide the cubic feet in crib by $2\frac{1}{2}$, or multiply by 2 and divide by 5.

Duration and Frequency of Heat in Normal Farm Animals

	In Heat for	If Not Impregnated Heat Will Occur in
Mares	5 to 7 days	3 to 6 weeks
Cows	2 to 3 days	3 to 4 weeks
Ewes	2 to 3 days	17 to 28 days
Sows	2 to 4 days	21 days

Average Period of Gestation

Mare	48½ wks. or 340 days	Extremes, 307-412 days
Cow	40½ wks. or 283 days	Extremes, 240-311 days
Ewe	22 wks. or 150 days	Extremes, 146-157 days
Sow	16 wks. or 114 days	Extremes, 109-120 days

TO DETERMINE CAPACITY OF BINS, CRIBS, ETC., IN BUSHEL OF PRODUCTS

Compute cubic feet by multiplying length by width by height for oblong or square bins, or 3.1416 by radius squared by height for cylindrical bins. Multiply by 4 and divide by 5 to find number of bushels. If corn is on the ear deduct $\frac{1}{3}$ from the result.

WEIGHTS and MEASURES

LINE OR LINEAR MEASURE

12 Inches	1 Foot
3 Feet	1 Yard
5½ Yards	1 Rod
320 Rods	1 Mile
1 Mile	5280 Feet

The following are also used:

1 Size	$\frac{1}{3}$ Inch
(Used by shoemaker)	
1 Hand	4 Inches
(Used in measuring the height of horses)	
1 Fathom	6 Feet
(Used in measuring depths at sea)	
1 Knot	1.15 Miles
(Used in measuring distances at sea)	

SQUARE OR SURFACE MEASURE

144 Squares Inches.....	1 Square Foot
9 Square Feet	1 Square Yard
30¼ Square Yards	1 Square Rod
160 Square Rods	1 Acre
640 Acres	1 Square Mile

An acre is equal to a square whose side is 208.71 feet.

DRY MEASURE

2 Pints.....	1 Quart
8 Quarts.....	1 Peck
4 Pecks.....	1 Bushel
1 Bushel contains 2150.42 cubic inches or approximately 1¼ cubic feet.	

LIQUID MEASURE

4 Gills.....	1 Pint
2 Pints.....	1 Quart
4 Quarts.....	1 Gallon
1 Gallon contains 231 cubic inches.	
1 Cubic Foot equals 7½ gallons.	

FEEDING VALUE OF DIFFERENT HAYS

Kind of Hay	Water	Ash	Pro- tein	Crude Fiber	Nitro- gen- free ex- tract	Ether ex- tract (fat)
Mixed Grasses.....	15.3	5.5	7.4	27.2	42.1	2.5
Timothy.....	13.2	4.4	5.9	29.0	45.0	2.5
Orchard Grass.....	9.9	6.0	8.1	32.4	41.0	2.6
Red Top.....	8.0	5.2	7.9	28.6	47.5	1.9
Kentucky Blue Grass.....	21.2	6.3	7.8	23.0	37.8	3.9
Meadow Fescue.....	20.0	6.8	7.0	25.9	38.4	2.7
Perennial Rye Grass.....	14.0	7.9	10.1	25.4	40.5	2.1
Mixed Grasses and Clovers....	12.9	5.5	10.1	27.6	41.5	2.6
Barley, cut in milk.....	15.0	4.2	8.8	24.7	44.9	2.4
Oats, cut in milk.....	14.0	5.7	8.9	27.4	41.2	2.8
Red Clover, Medium.....	15.3	6.2	12.3	24.8	38.1	3.3
Red Clover, Mammoth.....	21.2	6.1	10.7	24.5	33.6	3.9
Alsike Clover.....	9.7	8.3	12.8	25.6	40.7	2.9
White Dutch Clover.....	9.7	8.3	15.7	24.1	39.3	2.9
Crimson Clover.....	9.6	8.6	15.2	27.2	36.6	2.8
Lespedeza.....	11.0	8.5	13.8	24.0	39.0	3.7
Alfalfa.....	8.4	7.4	14.3	25.0	42.7	2.2
White Sweet Clover.....	22.1	6.5	11.6	24.2	33.2	2.4
Cowpeas.....	10.5	14.2	8.9	21.2	42.6	2.6
Soybean.....	11.8	7.0	14.9	24.2	37.8	4.3
Pea Vine.....	15.0	6.7	13.7	24.7	37.6	2.3
Vetch.....	11.3	7.9	17.0	25.4	36.1	2.3

COMMONLY ACCEPTED BUSHEL WEIGHTS

And Quantities Of Seeds Usually Sown Per Acre

Farm Seeds and Grasses	per bu.	Quantity per acre
Alfalfa	60	15 to 20 lbs.
Barley	48	96 lbs.
Beans, Field	60	40 to 60 lbs.
Beans, Lima	56	60 to 90 lbs.
Bromus, Grass	14	15 to 20 lbs.
Buckwheat	50	50 lbs.
Clover, Alsike	60	8 to 10 lbs.
Clover, Medium Red	60	10 to 12 lbs.
Clover, Mammoth Red	60	8 to 12 lbs.
Clover, Sweet	60	12 to 15 lbs.
Clover, White	60	5 to 8 lbs.
Corn, in hills	56	8 to 10 lbs.
Corn, in drills for soiling or silo where ears are desired.....	56	8 to 10 lbs.
Corn for Fodder.....	56	30 to 56 lbs.
Cow Peas, broadcast.....	60	60 to 90 lbs.
Flax, broadcast	56	25 to 30 lbs.
Grass, Canadian blue (solid seed)....	14	15 to 25 lbs.
Grass, Kentucky blue (solid seed)....	14	20 to 30 lbs.
Grass, English or Perennial Rye Grass	24	25 to 30 lbs.
Grass, Italian Rye Grass.....	24	35 to 40 lbs.
Grass, Meadow Fescue.....	24	20 to 25 lbs.
Grass, Orchard	14	22 lbs.
Grass, Red Top (solid seed).....	32	8 to 12 lbs.
Grass, Lawn Seed, 1 lb. for 200 sq. ft.		100 to 125 lb
Grass, Crested Wheat.....	14	15 lbs.
Grass, Western Rye or Slender Wheat Grass	14	15 lbs.
Grass, Meadow Fox Tail.....	14	22 lbs.
Grass, Tall Meadow Oat.....	14	30 to 40 lbs.
Kaffir Corn, broadcast.....	56	40 to 50 lbs.
Millet, for hay	50	50 lbs.
Millet, for seed	50	30 lbs.
Oats	32	64 to 96 lbs.
Peas, in drills	60	120 to 150 lbs.
Peas, broadcast	60	150 to 180 lbs.
Rape, Dwarf Essex, alone, broad- cast	50	6 to 8 lbs.
Rape, Dwarf Essex, alone, in drills..	50	4 lbs.
Rape, Dwarf Essex, with grain.....	50	1½ lbs.
Reed's Canary Grass or Phalaris....	32	4 to 6 lbs.
Rye, broadcast	56	56 to 84 lbs.

Sorghum, for syrup	50	8 to 10 lbs.
Sorghum, for fodder	50	50 to 60 lbs.
Soy Beans, broadcast	60	60 to 90 lbs.
Soy Beans, in drills	60	30 to 45 lbs.
Speltz	40	80 lbs.
Sudan Grass, broadcast	40	20 to 25 lbs.
Sudan Grass, in drills.....	40	8 to 10 lbs.
Timothy	45	10 to 12 lbs.
Vetches, broadcast	60	50 to 60 lbs.
Wheat	60	90 lbs.

TAKE THE NECESSARY PRECAUTIONS TO ESTABLISH A GOOD STAND

Failures to establish a good stand of grasses and legumes for hay, silage or pasture are not uncommon. Such failures are expensive and upset the well-planned crop production program. With proper precautions, these failures can largely be prevented. The precautions you must take are:

(1) Prepare a good seedbed, (2) plant at the right time, rate, and depth, and (3) manage the companion crop and the new seeding properly and carefully.

As we have mentioned already, a good seedbed must be fine and firm. This condition is necessary so that depth of planting can be controlled and so each tiny seed will be in contact with moist soil. A loose, coarse seedbed dries out before the seed can germinate and the young seedling can send its roots down to soil containing more moisture.

Because the seeds of forage grasses and legumes are small, they can not emerge through a very deep covering of soil. They should be planted only deep enough to insure contact with soil moisture. In no case should they be planted more than 1 to 1½ inches deep. Precision drilling in a firm seedbed to insure placing the seed ½ to 1 inch deep is best. If equipment is not available for precision drilling, cultipacking both before and after broadcast or other surface seeding gives good results.

Time of seeding is important. Usually seeding should be as early in the spring as possible. Young grass and legume seedlings must have ample time to become well established before they can survive rigorous winters. This is especially true of the legumes which should never be sown after the latter part of July. Seeding even at that time may be hazardous because of lack of moisture.







DAKOTA IMPROVED SEED COMPANY
MITCHELL, SOUTH DAKOTA

America's great new feed crop!



frontier

Brand

Hybrid Sorghums

Here Are America's Four Outstanding Hybrid Sorghums

FRONTIER 385 BRAND — *Early Maturity Hybrid*: This hybrid is bred to produce maximum yields in the shortest period of time. Just the right height for combining, it has a medium slender stem which is almost completely free from suckers. The medium-sized, semi-dry head is borne well above foliage. Light red seeds mature in about 85 days after planting. Under certain conditions, it is slightly more subject to lodging than other Frontier Brand varieties. Frontier Brand 385 is recommended for northern areas with a shorter growing season, or for late plantings in good milo country.

FRONTIER 400 BRAND — *Medium Early Maturity Hybrid*: This famous Frontier Brand hybrid has repeatedly demonstrated its ability to out-produce later-maturing hybrids and standard varieties under almost all

conditions and in almost all sections of the midwest. Medium-size, compact semi-dry heads are carried well above the sparse leaves, and in many cases can be harvested before frost. The moderate-size stem does not tiller or branch. Large, light-red seeds mature in 90 to 95 days, and under normal conditions, lodging is not a problem. Frontier 400 Brand is recommended for good land and normal rainfall — yet produces outstanding yields under drouth conditions. It has proven superior in plant emergence under adverse conditions and over a wide area, resulting in better stands with less seed per acre.

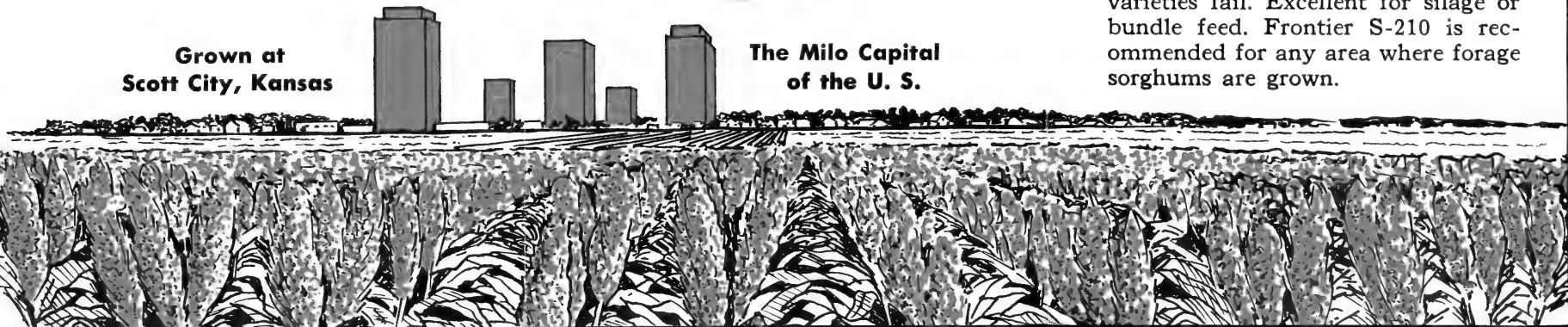
FRONTIER 410 BRAND — *Medium Maturity Hybrid*: This hybrid has a juicy, larger-than-average stem which supports a large, medium-compact, semi-dry head above several large leaves. Exertion is good, and heads

can easily be combined. It is outstanding in its resistance to lodging. The red seeds mature in approximately 100 days. Under conditions of abundant moisture and ample growing season, it will produce larger yields than Frontier 400 Brand. Frontier 410 Brand is recommended for good land, a longer growing season and ample rain fall or irrigation.

FRONTIER S-210 — *Early Maturity Forage Hybrid*: This early-maturing forage has all the good qualities of Atlas, plus stronger emergence, higher yields, greater drouth resistance and two weeks earlier maturity. Plants are 65 to 70 inches tall, with sweet stalks bearing large heads of palatable white grain. This sparsely-tillering hybrid matures in 110 days, and has repeatedly demonstrated its ability to emerge and produce a stand under conditions where other forage varieties fail. Excellent for silage or bundle feed. Frontier S-210 is recommended for any area where forage sorghums are grown.

Grown at
Scott City, Kansas

The Milo Capital
of the U. S.



DAKOTA IMPROVED SEED COMPANY
MITCHELL, SOUTH DAKOTA

Disco

ADAPTED

HYBRIDS

LIBRARY
RECEIVED

★ JAN 27 1958

U. S. Department of Agriculture



Use Disco Hybrids

THAT MATURE & YIELD

Grown at Scott City by Milo Specialists

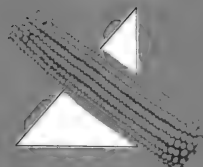
FRONTIER BRAND HYBRID SORGHUMS are grown at Scott City, Kansas — long famous as the “milo capital” of the U.S. Here, nature provides the *ideal* conditions for hybrid sorghum seed production . . . hot sun, rich soil, wide expanses of *irrigated* land . . . great wheat fields to provide complete isolation and prevent accidental cross-fertilization . . . and, most important of all, freedom from Johnson Grass, the deadly enemy of hybrid sorghum. At Scott City, seed is *field-cured* and *field-dried* — to guarantee high germination, strong emergence and uniform stands.

Frontier Brand Hybrids are more than mere improvements on standard, open-pollinated sorghums. Hybridizing and selective breeding have given plants new vigor, so that seedlings push their way through even thickly-crustured soil with strong, uniform emergence. Hybridizing and breeding have developed stronger, sturdier plants, with huge seed heads holding up to twice the weight of grain, and stiff, erect stalks just the right height for easy combining. In fact, all that's left of old-fashioned milo is its famous drouth resistance!

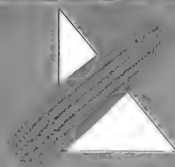
Distributed by
Dakota Improved Seed Co.
Mitchell, South Dakota

**Frontier
Hybrids, Inc.**
Scott City, Kansas

Disco HYBRIDS Disco



Here Is A Complete List of DISCO HYBRIDS with a Short Description of Each. Let Your Dealer Help You Choose the Right Varieties for Your Farm—



FREE OFFER

50c per bushel discount on all orders booked before January, 1958. Deposit of \$1.00 per bushel will hold all orders.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE!

DISCO 85-1 This is the earliest Yellow Dent Hybrid. Ears are of good size with deep kernels and very small cob. It has become well established in the northern belts for both grain and silage. Does well on good soil.

DISCO 85-1 This is an unusually early hybrid corn for the northern part of the Corn Belt. It stands up well and has ears about seven inches long. Does well on all soils.

DISCO 90-V Early maturing variety, suitable for entire midwest area. This corn has shown great promise in northern counties, and is highly recommended for that section. It has been outstanding in West River and Black Hills territory. Does well on all soils.

DISCO 90-SD 220 — 90 Day Relative Maturity under South Dakota conditions. This is one of South Dakota's new Hybrids. It is recommended for the northern and western tier of counties of the state. Yields are excellent especially good under heat and drought adversity. Plants are medium height with excellent standability. It has been outstanding in South Dakota corn trials.

DISCO 91-WR Half Northwestern Red Dent and half Yellow Dent parentage. The seed that you want will be either yellow or red, depending on the cross we use. The ears of the final crop are Red-Yellow with large kernels filled with mealy white starch. For feeding value you'll see that all livestock prefer the 91-WR corn.

DISCO 95-W An early maturing corn which shows a deep kernel and a nice uniform ear. Very similar to the Early Murdock type. This is an outstanding hybrid for the midwest corn area. Good on all soil types.

DISCO - SD 250 — 95 Day Relative Maturity. This is another of South Dakota's newest Hybrids. It has produced excellent yields especially under weather conditions not favorable for good corn growth. Plants are medium height with good standability adapted for the entire state of South Dakota. You should try this number.

DISCO 101-A This is one of our newer hybrids and the result of better improved inbreds and careful breeding. It has an excellent root system and sturdy stock. It has nice ear placement and produces large, well developed ears with good kernel depth and type. An unusually high yielder. It is a corn well adapted for the Midwest corn belt and is gaining in popularity. Recommended for better type soils.

DISCO 107AA Relative 105 to 107 days maturity. This Hybrid introduced last year has taken its place among the top Hybrids in the North Central Corn Belt. This Hybrid has made an outstanding record in all corn yields. Has a well shaped ear, excellent lodging resistance and low ear droopage. Compare it with any Hybrid you ever raised and you be the judge.

DISCO 108-AA This is one of our improved hybrids. DISCO 108-AA is a hybrid that shows great promise. Vigorous spring growth, very attractive leafy plants. Deep kernel ears insure high shelling percent. This variety will yield with hybrids a week later in maturity. Shows great promise on corn borer tolerance and the sturdy stalks resist lodging. Good for the good farmer with good soil.

DISCO 111-AA An improved member of the DISCO family. Excellent spring vigor. This is a tall plant with good ear height for picking. It has thick cylindrical ears, with deep kernels. Good semishort shank and disease resistant stalks tolerate corn borers. Strong roots for lodging resistance. It has a wide range of adaptation.

1958 DISCO HYBRID CORN PRICES

DISCO HYBRIDS	
Medium Flats	per bushel \$11.00
Medium Rounds	per bushel \$ 7.50
DRYLAND BLEND	
Medium Flats	per bushel \$ 8.00
Medium Rounds	per bushel \$ 6.50

DISCO DRYLAND BLEND The dual purpose hybrid corn. DRYLAND BLEND is a careful mechanical blend of top producing hybrids of slightly varying maturities. The purpose of this blend is to give you good sound corn under the most adverse weather conditions. This corn will not reach the same critical stage of growth all at once. If hot, dry winds kill pollen one day more pollen will be ready another day. This will truly give you crop insurance. There is a blend for each maturity zone.

DRYLAND BLEND will also give you the silage corn you have been looking for. For silage you would use a later blend than what you would for field corn. Varied maturities will give you grain from its earliness and heavy tonnage of succulent, leafy fodder from the late maturities. This too comes in different maturity blends for different maturity zones.

A WORD ABOUT HYBRID CORN

There are two types of Hybrid Corn —

- (1) Hard Flinty Type, and
- (2) Soft, Starchy Type

It has never appeared to us that it was good sense for a man to buy hybrid corn in order to obtain an increased yield, and then lose the advantage which he had gained in his feed lot. An animal cannot get the full feed value out of hard, flinty corn, without grinding. We have bred our hybrids for both feeding value and yield.

The DISCO HYBRIDS show a large percentage of soft starch, more along the order of an open pollinated corn. Our satisfied users find that it makes better corn than the hard, flinty varieties which are so commonly sold.

Every DISCO HYBRID offered for sale has been fully approved over a period of seasons under our hot, dry climatic conditions in the Midwest, and they have withstood the adverse condition which must be contended with in order to produce.

All DISCO HYBRIDS are uniformly graded and properly tested before leaving our plant, and treated to insure a good stand.



Mitchell, South Dakota
Watertown, South Dakota
Rapid City, South Dakota

DAKOTA IMPROVED SEED CO.

Emmetsburg, Iowa
Crawford, Nebraska

RELATIVE MATURITY CHART

	80-W 80-WD	85-W	90-W 91-WR	95-W	101-A	108-AA	107-A	108-A	111-AA
DISCO									
DEKALB		43 46	55 56	236 65	58 62	63 239 240 252	248 401 408 410	455 458 402	404-A 422
PIONEER	396	395	388 382	383	377-A 379-A 372	349 371 373	350-B 352	337	347 354
FUNKS	G-2	G-35A G-188	G-11	G-6	G-18 G-1A	G-68A G-21	G-26 G-22	G-33A G-33 G-29	G-30A G-77A G-16A G-75A
KINGSCROST	KF KC3 KE3	KE1 KE2 KE7	KA4 KH3 KS2	KS3 KS4	KB4 KL KS5 KS6	KL1 KO KO5	KO4 KT KY4	KR2 KT1	KT6 K3A
CARGILL	84N	87N	100N A95N	A100N	105-N A98-N 103-N	A110-N	L-210 E-402 115-N	A108-N 180 112-N	250 251
SOKOTA			220	250 262	262 270 400	400	604		



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See Your Local Dealer

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MITCHELL, SOUTH DAKOTA